

What is Claimed:

1. A method for fitting golf equipment, comprising:
marking a golf ball with color markings, the color marking comprising at least two colors; and
collecting data related to how the golfer's swing launches a golf ball using a color camera and the color marking.
2. The method of claim 1, further comprising specifying golf equipment based on the collected launch data.
3. The method of claim 1, wherein the collected data comprises data related to the spin of a golf ball hit by the golfer.
4. The method of claim 1, wherein the collected data comprises data related to the speed of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.
5. The method of claim 1, wherein the collected data comprises data related to the launch angle of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.
6. The method of claim 1, wherein collecting data comprises converting images of the color markings on the golf ball captured by the color camera into spin, speed, and launch angle data.

7. The method of claim 1, further comprising deriving ball flight characteristics based on the collected data.

8. The method of claim 7, further comprising displaying information related to the derived ball flight characteristics.

9. The method of claim 7, wherein the derived ball flight characteristics comprise carry distance, total distance, and height characteristics.

10. The method of claim 1, further comprising averaging collected data for a plurality of swings and specifying golf equipment based on the averaged launch data.

11. A method for fitting golf equipment, comprising:
deriving an optimum launch model;
collecting data related to how the golfer's swing launches a golf ball;
and
specifying golf equipment based on the collected launch data and derived optimum launch model.

12. The method of claim 11, wherein the collected data comprises data related to the spin of a golf ball hit by the golfer.

13. The method of claim 11, wherein the collected data comprises data related to the speed of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.

14. The method of claim 11, wherein the collected data comprises data related to the launch angle of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.

15. The method of claim 11, wherein collecting data comprises converting images of color markings on the golf ball captured by a color camera into spin, speed, and launch angle data.

16. The method of claim 11, further comprising deriving ball flight characteristics based on the collected data.

17. The method of claim 16, further comprising displaying information related to the derived ball flight characteristics.

18. The method of claim 16, wherein the derived ball flight characteristics comprise carry distance, total distance, and height characteristics.

19. The method of claim 11, further comprising averaging collected data for a plurality of swings and specifying golf equipment based on the averaged launch data.

20. The method of claim 11, wherein deriving an optimized launch model comprises determining an optimum trajectory height limitation.

21. The method of claim 20, wherein deriving an optimum launch model further comprises deriving a relationship between golf ball velocity,

launch angle, and spin of the golf ball that will result in an optimum golf ball trajectory without exceeding the optimum trajectory height limitation.

22. The method of claim 21, wherein the relationship is derived in a manner that maximizes launch angle and reduces spin for a given velocity.

23. A golf equipment fitting system, comprising:

a color camera; and

a launch module configured to collect data related to how the golfer's swing launches a golf ball marked with color markings using the color camera.

24. The golf equipment fitting system of claim 23, wherein the collected data comprises data related to the spin of a golf ball hit by the golfer.

25. The golf equipment fitting system of claim 23, wherein the collected data comprises data related to the speed of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.

26. The golf equipment fitting system of claim 23, wherein the collected data comprises data related to the launch angle of a golf ball hit by the golfer as the golf ball leaves the face of the club swung by the golfer.

27. The golf equipment fitting system of claim 23, wherein the launch module is configured to convert images of the color markings on the golf ball captured by the color camera into spin, speed, and launch angle data.

28. The golf equipment fitting system of claim 23, wherein the launch module is further configured to derive ball flight characteristics based on the collected data.

29. The golf equipment fitting system of claim 28, further comprising a display, and wherein the launch module is further configured to display information related to the derived ball flight characteristics.

30. The golf equipment fitting system of claim 28, wherein the derived ball flight characteristics comprise carry distance, total distance, and height characteristics.

31. The golf equipment fitting system of claim 23, wherein the launch module is further configured to average collected data for a plurality of swings.